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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/052,080

01/17/2002

Rangamani Sundar

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09/08/2004

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EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT

PAPER NUMBER

2686

8

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,080

Applicant(s)

SUNDAR ET AL.

Examiner

Naghmeh Mehrpour

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed reference listed in the information Disclosure submitted on 04/08/02 have been considered by the examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 1**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall (US Publication 2002/0085516 A1) in view of Swartz et al. (US Patent Number 6,330,244 B1).

Regarding **claim 1**, Bridgelall teaches a method of internetworking a mobile station to operate in a wireless wide area network WWAN (page 2 section 0011), comprising:

provisioning a switch 1315 (Access Point) to communicate with the WLAN via IP communication (see figure 13, page 8 section 0076);

the switch 1315 (AP) receiving mobile station communications via the WLAN (see figure 13, page 2 sections 0011).

Bridgelall fails to teach a method wherein the switch 1315 (AP) further communicates with a PBX via a PBX interface;

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the switch converting said mobile station communications to a format compatible with the PBX interface and forwarding the converted communications to the PBX; and the PBX receiving and handling the converted communications.

However Swartz teaches a method for linking two or more wireless networks comprising step of provisioning a switch 610 (Access Point) to communicate with the WLAN 650 (WAN) via IP communication communicating with a PBX 630 via a PBX interface (see figures 6A, col 5 lines 46-53, col 6 lines 36-50). Swartz inherently teaches the switch (AP) converting said mobile station communications to a format compatible with the PBX interface and forwarding the converted communications to the PBX (col 6 lines 36-41); and

the PBX receiving and handling the converted communications (col 3 lines 35-42, col 4 lines 58-64), as evidences by Yukie wherein specifically teaches a switch (325) converting said mobile station communications to a format compatible with the PBX interface and forwarding the converted communications to the PBX (page 4 section 0034, section 0055); and the PBX receiving and handling the converted communications (page 4 section 0039). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Swartz with Bridgelall, in order to enable the users to download audio data files by providing an improved data communication system for connecting a wireless LAN to a PBX which is specially useful to visually impaired users.

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4. **Claims 2-4, 6-8,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall (US Publication 2002/0085516 A1) in view of Swartz et al. (US Patent Number 6,330,244 B1) in further view of Yukie (US Publication 2003/0036392 A1).

Regarding **claim 2**, Bridgelall teaches a method wherein the switch further provisioned to communicate with a WWAN (page 2 section 0011). Bridgelall modified by Swartz fails to teach a method wherein the switch analyzes the mobile station communications and determines that the communications address an entity external to a domain of the PBX and in response thereto;

the switch requesting a TLDN from a MSC serving the WWAN;

in response to receiving a TLDN from the MSC, the switch sending a message to the PBX to connect the mobile station call to the specified TLDN;

the PBX connecting the mobile station call to the specified TLDN 1150 .

However Yukie teaches a method wherein the switch (325) analyzes the mobile station communications and determines that the communications address an entity external to a domain of the PBX and in response thereto the switch (325) requesting a TLDN from a MSC serving the WWAN (figure 10, 1020, page 6 section 0059);

in response to receiving a TLDN from the MSC, the switch (325) sending a message to the PBX (exchange switch) to connect the mobile station call to the specified TLDN (page 6 section 0060);

the PBX (exchange switch) connecting the mobile station call to the specified TLDN 1150 (page 6 section 0059). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Yukie with Bridgelall modified by Swartz, in order to prevent call drop and to provide

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better quality, the mobile that can actively scan for a network by sending out commands and the system automatically transfer the logic connection, while maintaining voice or data communication.

Regarding **claim 3**, Bridgelall teaches a method further including:

the mobile station roaming during the call (page 7 sections 0066, 0067);

the mobile station switching to a WWAN air interface protocol (page 3 section 0029);

Bridgelall further inherently teaches the mobile switching back to a WWAN automatically (reconnecting) (page 7 section 0067). Bridgelall modified by Swartz fails to teach a mobile station connecting to the call by specifying the TLDN of the call.

However, Yukie teaches a method including: a mobile station connecting to the call by specifying the TLDN of the call (page 6 section 0055). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Yukie with Bridgelall modified by Swartz, in order to prevent call drops and to provide better quality system that can operates in conjunction of a private system.

Regarding **claim 4**, Bridgelall inherently teaches a method wherein the mobile station automatically reconnects (page 3 section 0026) to the call without user intervention (page 7 section 0066, section 0067). Bridgelall teaches a method enables a mobile to seamlessly switch between a WLAN and WWAN or vice-versa (page 6 section 0052). For example, the mobile connects to WWAN, and then disconnects from WWAN and

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switches (connects) to WLAN. When the mobile is ready to switch back to WWAN, it needs disconnects from WLAN and reconnects to WWAN.

Regarding **claim 6**, Bridgelall inherently teaches a method wherein the PBX maintains call connections to the MSC when the mobile station is detected as having lost communication with the switch (page 5 sections 0054, 0055). For example the system (PBX and MSC) connects from WLAN to WWAN (vise versa), when there is a new slot available in the WWAN system, therefore, one mobile must lose the connection, in order for a new slot to be available.

Regarding **claim 7**, Bridgelall teaches a method further including:

the mobile station roaming during the all (page 7 sections 0066, 0067);
the mobile station determining that it should communicate according to a WWAN air interface protocol while the mobile station is participating in a call under a WLAN air interface protocol and in response thereto (page 7 sections 0062, 0065, 0066);
sending a message to a source MSC (see figure 12, 1211) servicing the WLAN that a handoff (roaming) is desired (page 7 sections 0065);
the source MSC (1211 page 7 section 0068), analyzing the message, establishing an anchor MSC (WLAN) (access point AP, page 8 section 0070), and establishing communication channels with a target MSC (AP) servicing a geographic WWAN area in which the mobile station resides (Page 7 section 0068, page 8 section 0071);

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the mobile station beginning communication with the WWAN and the target MSC (AP) relaying those communication to the anchor MSC (AP) (page 8 sections 0072, 0073, 0074).

Regarding **claim 8**, Bridgelall teaches a method wherein in figure 9 describes a dual mode Radio 900, which enables a user to seamlessly switch between a WLAN and a WWAN or vice-versa while roaming in either network area (page 6 section 0052). The broadcast channels further comprise a Synchronization Channel (SCH) 326, which supplies the mobile station with the key training sequence needed to modulate the information coming from the base station. A Broadcast Control Channel (BCCH) 330 informs the mobile station about specific system parameters needed to identify the network or to gain access to the network. These parameters include, among others, the Location Area Code (LAC), the Mobile Network Code (MNC), the information in which frequencies and neighboring cells may be found; different cell options and access parameters (Page 4 section 0037).

Bridgelall inherently teaches a method wherein the mobile station informs the MSC (AP) serving the LAN of the cell ids of the WWAN geographic area, and wherein the source MSC 1211 uses the cell ids information to establish communication channels with the target MSC maintenance (page 3 section 0032, page 4 section 0041), as evidenced by a fact that in the handoff procedures the mobile station informs the new MSC serving of the cell ids of the prior geographic area, and wherein the old MSC uses the cell ids information to establish communication channels with the new MSC

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maintenance as cited in the reference Sollee (US Patent Number 6,393,288 B1) (col 5 lines 44-53).

5. **Claim 5**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall (US Publication 2002/0085516 A1) and Swartz (US Patent Number 2003/0093798 A1), in view of Yukie (US Publication Number 2003/0036392 A1) in further view of Coursey et al. (US Patent Number 5,995,839).

Regarding **claim 5**, Bridgelall modified by Swartz and Yukie fails teaches a method wherein the PBX tears down call connection to the MSC when the mobile station is detected as having lost communication with the switch. However Coursey teaches a method wherein the switch tears down call connection to the MSC when the mobile station is detected as having lost communication with the switch (col 8 lines 65-67, col 9 lines 1-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Coursey with Bridgelall modified by Swartz and Yukie, in order to provide an improved personal telephone communication system precisely controls and reduces potential for harmful interference between the networks.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gunnarsson et al. (US Patent 2003/0110118015 A1) disclose location based notification of WLAN availability via wireless communication network

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McIntosh (US Patent Number 6,658,259 B2) disclose wireless network having a virtual HLR and method of operating the same

Lucidarme et al. (US Patent Number 2003/0186678 A1) disclose method for monitoring communications in a cellular radio communication system and network core

Lu et al. (US Patent Number 6,694,134 B1) disclose terminal device emulator

Hyvarinen et al. (US Patent Number 2002/00885540 A1) disclose telecommunication service provision in multi-network wireless telecommunication system

Sollee et al. (US Patent Number 6,393,288 B1) disclose a method of identifying mobile station location to establish homezone feature

7. Any responses to this action should be mailed to:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 703-308-7159. The examiner can normally be reached on 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid be reached on (703) 306-3061.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

August 19, 2004

A handwritten signature in black ink, appearing to read 'M. Mehrapour', written in a cursive style.

MELODY MEHRAPOUR
PATENT EXAMINER